

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/061864 A2

(51) International Patent Classification⁷:

G21K

(21) International Application Number:

PCT/IB2004/000007

(22) International Filing Date: 5 January 2004 (05.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/438,216 6 January 2003 (06.01.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

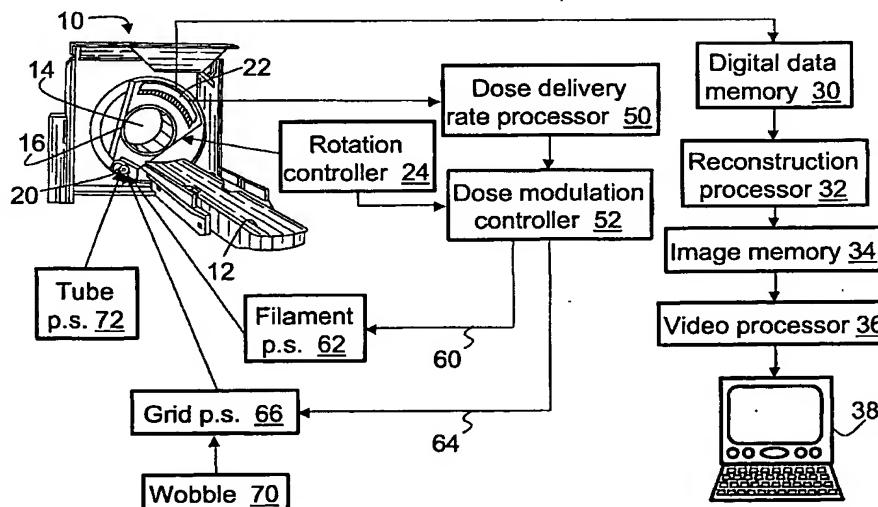
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CR, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGH SPEED MODULATION OF SWITCHED-FOCUS X-RAY TUBE



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(57) Abstract: A dose-modulated irradiating system includes an x-ray tube (20) with at least a filament (80) for generating electrons, a cathode (84) and an anode (92) for accelerating and collimating the generated electrons into an electron beam (94), and an electrostatic grid with grid electrodes (110, 112) for steering the electron beam (94) on the anode (92). The anode (92) generates an x-ray beam (96) responsive to the electron beam (94). Grid biasing is provided for applying a time-varying electrical bias to the grid electrodes (110, 112) that produces a first time-varying intensity modulation of the electron beam (94). A current of the filament (80) is modulated to produce a second time-varying intensity modulation of the electron beam (94). A controller (52) controls cooperatively combining the first and second time-varying intensity modulations to produce a combined time-varying intensity modulation.